

**U.S.S.N 09/678,619**  
**Motsenbocker**  
**AMENDMENT**

**REMARKS**

Any fees that may be due in connection with this application may be charged to Deposit Account No. 50-1213. If a Petition for extension of time is needed, this paper is to be considered such Petition.

Claims 1-4, 8-35, 41, 43-45, 47-49 and 53-58 are pending in this application. Claims 36, 39 and 40 are cancelled herein without prejudice or disclaimer. Applicant reserves the right to file divisional application(s) directed to any cancelled subject matter.

Claims 2, 26-35, 49, 53, 54, 55 and 58 are amended herein. Basis for the amendments is found in the specification and claims as originally filed. The claims are amended to incorporate the limitations of a dependent claim, or to be rewritten as an independent claim incorporating the limitations of the base claim and any intervening claims. No new matter has been added.

**OBJECTION TO THE SPECIFICATION**

**The use of trademarks**

The Office Action has reaffirmed the objection to the use of numerous trademarks in the application and requests that trademarks be capitalized and accompanied by generic terminology wherever they appear.

As described above, the amendments to the specification at pages 3-7, 9, 21, 23-26, 30-34, 36 and 37 overcome this objection. In particular, AEROSIL<sup>®</sup>; BUTYL CELLOSOLVE<sup>®</sup>; DOWANOL<sup>®</sup>; METHOCEL<sup>®</sup>; MOTSENBOCKER'S LIFT OFF<sup>®</sup>; PLEXIGLAS<sup>®</sup>; STYROFOAM<sup>®</sup>; SPAN<sup>®</sup>; and TRITON<sup>®</sup> are registered trademarks. Belmay Citrul, Belmay Lemon, Calumet 400-500 and polystyrene are not registered trademarks.

Applicant respectfully requests reconsideration and removal of this objection.

**REJECTION OF CLAIMS 2 AND 49 UNDER 35 U.S.C. §112, SECOND PARAGRAPH**

**Claim 2**

The Office Action has objected to claim 2 for reciting "exempt VOC"

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which allegedly has insufficient antecedent basis, and therefore, is allegedly indefinite.

As amended herein, claim 2 does not recite "exempt VOC." As amended, claim 2 recites "carrier solvent" which has antecedent basis in claim 1.

Applicant respectfully requests reconsideration and removal of this objection.

**Claim 49**

The Office Action has objected to claim 49 for reciting "low VOC composition of claim 1" which allegedly has insufficient antecedent basis, and therefore, is allegedly indefinite.

As amended herein, claim 49 does not recite "low VOC composition of claim 1." As amended, claim 49 recites "composition" which has antecedent basis in claim 1.

The Office Action has objected to claim 49 for reciting "second low VOC composition of claim 1" which allegedly has insufficient antecedent basis, and therefore, is allegedly indefinite.

As amended herein, claim 49 does not recite "second low VOC composition of claim 1." As amended, claim 49 recites "composition" which has antecedent basis in claim 1.

Applicant respectfully requests reconsideration and removal of this objection.

**REJECTION OF CLAIMS 1-10, 12-15, 26-28, 36-39, 41, 42 AND 47 UNDER 35 U.S.C. §102(b)**

The Office Action has reaffirmed the rejection of claims 1-10, 12-15, 26-28, 36-39, 41, 42 and 47 under 35 U.S.C. §102(b) for allegedly being anticipated by the disclosure of Motsenbocker (U.S. Patent No. 4,306,989). Applicant respectfully traverses this rejection.

Claims 5-7, 37, 38, 42, 46 and 50-52 were cancelled in the AMENDMENT of August 8, 2002, which renders the objection to these claims moot. Claims 36, 39 and 40 are cancelled herein which renders the objection to

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these claims moot. The rejection of pending claims 1-4, 8-10, 12-15, 26-28, 41 and 47 is addressed below.

**Relevant Law**

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Spada*, 15 USPQ2d 1655 (Fed. Cir, 1990), *In re Bond*, 15 USPQ 1566 (Fed. Cir. 1990), *Soundsciber Corp. v. U.S.*, 360 F.2d 954, 148 USPQ 298, 301, adopted 149 USPQ 640 (Ct. Cl.) 1966. See, also, *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913,1920 (Fed. Cir.), *cert. denied*, 110 S.Ct. 154 (1989). "[A]ll limitations in the claims must be found in the reference, since the claims measure the invention." *In re Lang*, 644 F.2d 856, 862, 209 USPQ 288, 293 (CCPA 1981). Moreover, it is incumbent on the Examiner to identify wherein each and every facet of the claimed invention is disclosed in the reference. *Lindemann Maschinen-fabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). Further, the reference must describe the invention as claimed sufficiently to have placed a person of ordinary skill in the art in possession of the invention. An inherent property has to flow naturally from what is taught in a reference. *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981). "Rejections under 35 U.S.C. §102 are proper only when the claimed subject matter *is* identically disclosed or described in the "'prior art'", "...the [r]eference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings in the references. Such picking and choosing may be entirely proper when making a rejection of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the *similarity* of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection." [Emphasis in original]. *In*

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*re Arkey, Eardly, and Long*, 455 F.2d 586, 172 USPQ 524 (CCPA 1972).

**The instant claims**

Claim 1 is directed to a composition containing a first solvent able to remove adherent deposits from surfaces and substrates; and a carrier solvent that is Light Hydrotreated Petroleum Distillates.

Claims 2-4 further describe the first solvent and carrier solvent of claim 1.

Claim 8 is directed to a composition comprising:

a first solvent, wherein said first solvent is able to remove adherent deposits from surfaces and substrates; and,

a carrier solvent that is a mixture of Light Hydrotreated Petroleum Distillates and water.

Claim 9 is directed to the composition of claim 1 that also contains an additive.

Claims 10 and 12-15 further describe the first solvent and carrier solvent of claim 9.

Claims 26-28 are directed to the composition of claim 1 wherein the composition contains less than or equal to 50, 40, or 35 weight % of said carrier solvent that is Light Hydrotreated Petroleum Distillates.

Claim 41 is directed to a method of releasing adherent deposits from a surface or substrate, by applying a composition of claim 1 to the deposit; and removing the released deposit from the surface or substrate.

Claim 47 includes the step of removing the released deposits.

**The disclosure of Motsenbocker and differences from the instant claims**

**Claim 1 and claims dependent thereon**

Motsenbocker discloses compositions for releasing adherent deposits from surfaces. The compositions disclosed in the reference contain a first solvent, such as xylene, for softening or dissolving adhesives, and a carrier, such as a petroleum distillate, including kerosene.

The Office Action points to column 2, lines 13-29, of the reference,

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which describes compositions containing a first solvent, having a higher inherent volatility, and a carrier solvent, selected for a lower inherent volatility. The reference, however, does not disclose compositions where the carrier is Light Hydrotreated Petroleum Distillates, as defined in the instant specification (see, page 6, lines 7-12):

"As used herein, Calumet 400-500, < 1% means Light Hydrotreated Petroleum Distillates (CAS number 64742-47-8) which is a high boiling (> 200°C) solvent (chemical formula: C<sub>10</sub>-C<sub>17</sub>) that is commercially available from Calumet Lubricants Company, (2780 Waterfront Pkwy E. Suite 200, Indianapolis, IN 46214, product code 0501-00) and is a non-VOC or an exempt VOC."

Motsenbocker does not disclose carriers that meet this definition. Motsenbocker discloses at column 3, line 1 to line 2, that "Petroleum distillates are excellent for the carrier, especially kerosene."

The Office Action points to the MSDS listing for "Distillates (Petroleum), Hydrotreated Light" which is also known as "low odor paraffinic solvent"; "dearomatized kerosene"; and "deodorized kerosene" (ICSC: 1379, CAS# 64742-47-8) and alleges that the disclosure of Motsenbocker anticipates the instant claims. Applicant respectfully disagrees.

Motsenbocker discloses "kerosene" but does not disclose "Light Hydrotreated Petroleum Distillates" as the carrier solvent. Attached is the MSDS listings for "Kerosene" (ICSC: 0663, CAS# 8008-20-6) and for "Distillates (Petroleum), Hydrotreated Light" (ICSC: 1379, CAS# 64742-47-8. A comparison of the two MSDS sheets demonstrates that these solvents have different physical properties, such as boiling points; melting points; densities; solubility in water; flash point; auto ignition temperature; and explosive limits, as described in Table 1, below.

Table 1

Physical Property	Distillates (Petroleum) Hydrotreated Light ICSC: 1379 CAS# 64742-47-8)	Kerosene ICSC: 0663 CAS# 8008-20-6
Boiling points	175-270°C	150-300°C
Melting points	-58°C	-20°C
Density	0.79-0.82 g/cm <sup>3</sup>	0.8 g/cm <sup>3</sup>
Solubility in water g/100 mL at 20°C	0.15g	none
Relative vapor density (air = 1)	4.5	4.5
Flash point	68-74°C	37-65°C
Auto-ignition temperature	236°C	220°C
Explosive limits, vol% in air	0.6-5.5	0.7-5

Thus, "Kerosene" and "Light Hydrotreated Petroleum Distillates" are different solvents. Motsenbocker does not disclose "Light Hydrotreated Petroleum Distillates", and therefore, claim 1, and claims dependent thereon, including claims 2-4, 8-10, 12-15, 26-28, 41 and 47 are not anticipated by the disclosure of the reference.

**Claim 2 and claims dependent thereon**

The Office Action alleges that claim 2 is anticipated by Motsenbocker at column 3, line 65 to column 4, line 8. Applicant respectfully disagrees.

Motsenbocker discloses "water-based formulations which contains a first solvent, and may contain a second solvent." The reference also discloses that "the carrier is water, but may include some petroleum distillate, especially naphtha or kerosene" and that the preferred range is 20 to 55% water, but does not disclose a composition, wherein the first solvent is from about 0.1% to about 50.0 weight %; and carrier solvent is from about 50.0% to about 99.9

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weight % Light Hydrotreated Petroleum Distillates as required by instant claim

2. Therefore, claim 2 is not anticipated by Motsenbocker.

**Claims 8, 9 and 10 and claims dependent thereon**

The Office Action alleges that claims 8, 9 and 10 are anticipated by Motsenbocker by the table provided at claim 2. Applicant respectfully disagrees.

Motsenbocker discloses at column 3, line 24 to line 33, non-water based formulations of xylene; trichloroethylene; kerosene; light mineral oil; and lemon oil (as required) and at column 3, line 62 to column 4, line 8, water-based formulations of xylene; trichloroethylene; kerosene; water; surfactants; and BUTYL CELLOSOLVE®, but does not disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates as required by instant claims 8, 9 and 10. Therefore, claims 8, 9 and 10 are not anticipated by Motsenbocker.

**Claim 12 and claims dependent thereon**

The Office Action alleges that claim 12 is anticipated by Motsenbocker at column 3, line 46 to line 50. Applicant respectfully disagrees.

Motsenbocker discloses that "Surfactants can be provided to assist in the cleaning of the surface and to aid in the suspension and emulsification" but does not disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates as required by instant claim 12. Therefore, claim 12 is not anticipated by Motsenbocker.

**Claim 13 and claims dependent thereon**

The Office Action alleges that claim 13 is anticipated by Motsenbocker at column 3, line 46 to line 50. Applicant respectfully disagrees.

Motsenbocker discloses that "Surfactants can be provided to assist in the cleaning of the surface...." and "Suitable examples are TRITON® X-100 and TRITON® X-114, sold by Rohm & Hass, Sorbitan esters, or nonyl phenoxy polyethoxy ethanol" but does not disclose that the cleaner is ethanol, nor does it disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates

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as required by instant claim 13. Therefore, claim 13 is not anticipated by Motsenbocker.

**Claim 14 and claims dependent thereon**

The Office Action alleges that claim 14 is anticipated by Motsenbocker at column 3, line 36 to line 37. Applicant respectfully disagrees.

Motsenbocker discloses that "Some or no mineral oil, and some or no lemon oil may be used" but does not disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates as required by instant claim 14. Therefore, claim 14 is not anticipated by Motsenbocker.

**Claim 15 and claims dependent thereon**

The Office Action alleges that claim 15 is anticipated by Motsenbocker at column 3, line 62 to column 4, line 8. Applicant respectfully disagrees.

Motsenbocker discloses water-based formulations at column 3, line 62, to column 4: xylene (5-30%); trichloroethylene (0-30%); kerosene (0-70%); water (20-55%); surfactants (2-15%); and BUTYL CELLOSOLVE® (0-2%) but does not disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates as required by instant claim 15. Therefore, claim 15 is not anticipated by Motsenbocker.

**Claims 26-28 and claims dependent thereon**

The Office Action alleges that claims 26-28 are anticipated by Motsenbocker at column 3, line 62 to column 4, line 37. Applicant respectfully disagrees.

Motsenbocker discloses water-based formulations at column 3, line 62, to column 4: xylene (5-30%); trichloroethylene (0-30%); kerosene (0-70%); water (20-55%); surfactants (2-15%); and BUTYL CELLOSOLVE® (0-2%) but does not disclose that the composition contains less than or equal to 50 weight %; 40 weight %; or 35 weight % of said carrier solvent that is Light Hydrotreated Petroleum Distillates, as required by instant claims 26-28, respectively. Therefore, claims 26-28 are not anticipated by Motsenbocker.



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**Claim 36 and claims dependent thereon**

The Office Action alleges that claim 36, now instant claim 41 is anticipated by Motsenbocker at column 3, line 62 to column 4, line 37 and the reference to use of mineral oil at column 3, line 39 to line 41. Applicant respectfully disagrees.

Motsenbocker discloses water-based formulations at column 3, line 62, to column 4: xylene (5-30%); trichloroethylene (0-30%); kerosene (0-70%); water (20-55%); surfactants (2-15%); and BUTYL CELLOSOLVE® (0-2%) and discloses that "Mineral oil can be added in small amounts. It serves surprisingly well to render removed, undissolved adhesives non-sticking so they can readily be wiped off" but does not disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates, as required by instant claim 41. Therefore, claim 41 is not anticipated by Motsenbocker.

**Claim 47 and claims dependent thereon**

The Office Action alleges that claim 47 is anticipated by Motsenbocker at column 3, line 62 to column 4, line 37 and the reference to use of wiping at column 3, line 39 to line 41 and at column 1, line 67 to column 2, line 6. Applicant respectfully disagrees.

Motsenbocker discloses water-based formulations at column 3, line 62, to column 4: xylene (5-30%); trichloroethylene (0-30%); kerosene (0-70%); water (20-55%); surfactants (2-15%); and BUTYL CELLOSOLVE® (0-2%) and discloses at column 3, line 39 to line 41 that "Mineral oil can be added in small amounts. It serves surprisingly well to render removed, undissolved adhesives non-sticking so they can readily be wiped off"; and also discloses at column 1, line 67 to column 2, line 6 that "...the label with the adhesive can be lifted cleanly with a blade, leaving behind a surface which does not require wiping or further treatment..." but does not disclose that the carrier solvent is Light Hydrotreated Petroleum Distillates as required by instant claim 47. Therefore, claim 47 is not anticipated by Motsenbocker.

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Applicant respectfully requests reconsideration and removal of this objection.

**REJECTION OF CLAIMS 1, 3 and 4 UNDER 35 U.S.C. §102(b)**

The Office Action has reaffirmed the rejection of claims 1, 3 and 4 under 35 U.S.C. §102(b) for allegedly being anticipated by the disclosure of Hey *et al.* (U.S. Patent No. 4,260,510). Applicant respectfully traverses this rejection.

**Relevant Law**

The relevant law is previously discussed.

**The instant claims**

The instant claims are previously described.

**The disclosure of Hey *et al.* and differences from the instant claims**

Hey *et al.* discloses at column 1, line 10 to line 16, compositions containing "1,1,2-trichloro-1,2,2-trifluoroethane as a primary solvent and a cosolvent." The reference further discloses that the cosolvent "may be selected from a very large number of solvents including by way of example, methylene chloride, acetonitrile, methyl acetate, methylal, acetone, 1,1-dichloroethane, trans-dichloroethylene and lower aliphatic alcohols, for example, ethanol."

Hey *et al.* does not disclose any compositions containing Light Hydrotreated Petroleum Distillates as required by instant claims 1, 3 and 4. Therefore, claims 1, 3 and 4 are not anticipated by the disclosure of Hey *et al.*

Applicant respectfully requests reconsideration and removal of this objection.

**REJECTION OF CLAIMS 11, 43 and 44 UNDER 35 U.S.C. §103(a)**

The Office Action has reaffirmed the rejection of claims 11, 43 and 44 under 35 U.S.C. §103(a) for allegedly being obvious over the teachings of Motsenbocker (U.S. Patent No. 4,306,989) in view of Jackson (U.S. Patent No. 6,342,471) and further in view of Lloyd *et al.* (U.S. Patent No. 4,421,665). Applicant respectfully traverses this rejection.

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**Relevant Law**

[I]n order to establish a *prima facie* case of obviousness, there must be evidence, preferably a teaching, suggestion, incentive or inference from the cited art or in the form of generally available knowledge that one of ordinary skill would have been led to modify the relevant teaching to arrive at what is claimed. *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963).

The prior art must provide a motivation whereby one of ordinary skill in the art would have been led to do that which the applicant has done. *Stratoflex Inc. v Aeroquip Corp.*, 713 F.2d 1530, 1535, 218 USPQ 871, 876 (Fed. Cir. 1983). In addition, the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests the desirability of the modification. *In re Fritch*, 23 USPQ 1783 (Fed. Cir. 1992).

In addition, unexpected properties must always be considered in the determination of obviousness. A compound's structure and properties are inseparable so that unexpected properties are part of the subject matter as a whole. *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963).

**The instant claims**

Claim 11 is directed to a composition of claim 10, which is dependent on claim 9, which is dependent on claim 1, as described above, wherein the second solvent is n-propyl bromide.

Claim 43 is directed to the method of claim 39, which is dependent on claim 36, which is dependent on claim 1, for releasing adherent deposits from a surface with a composition containing:

- a first solvent which is 6.2 weight % methylal;
- a carrier solvent which is 92.0 weight % Light Hydrotreated Petroleum Distillates;
- a cleaner which is 0.8 weight % ethanol; and,
- a fragrance which is 1.0 weight %.

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Claim 44 is directed to the method of claim 39, which is dependent on claim 36, which is dependent on claim 1, for releasing adherent deposits from a surface with a composition containing:

a first solvent which is 2.0 weight % methylal;

a carrier solvent which is 84.0 weight % Light Hydrotreated Petroleum Distillates;

a second solvent which is 8.0 weight % n-propyl bromide;

a surfactant which is 5.0 weight % t-octylphenoxypolyethoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol; and,

a fragrance which is 1.0 weight %.

**The teachings of the references and differences from the instant claims**

Motsenbocker teaches compositions for releasing adherent deposits from surfaces. The compositions taught in the reference contain a first solvent, such as xylene, for softening or dissolving adhesives, and a carrier, such as a petroleum distillate, including kerosene. The reference, however, does not teach or suggest compositions where the carrier is Light Hydrotreated Petroleum Distillates, as defined in the instant specification (see, page 6, lines 7-12) and required by instant claims 11, 43 and 44.

Jackson teaches "a propellant-rich aerosol cleaner for use with electrical circuit boards and electrical connector components includes a solvent having a low or no ozone depletion potential and a propellant." The reference further teaches that "the solvent is n-propyl bromide and is present in a concentration of about 40 weight percent." The Office Action points to column 3, line 43 to line 55 of the reference which recites "It has been found that brominated solvents, and most preferably nPB, have excellent characteristics for use as an electrical contact cleaner." The reference, however, does not teach or suggest compositions where the carrier is Light Hydrotreated Petroleum Distillates as required by claims 11, 43 and 44. Thus, the teachings of Jackson does not cure the defect in Motsenbocker. The combination of Motsenbocker and

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Jackson does not result in the composition of claim 11, which contains Light Hydrotreated Petroleum Distillates, as defined in the instant application. Therefore, claim 11 is not *prima facie* obvious over the teachings of Motsenbocker in view of Jackson.

Lloyd *et al.* teaches "a composition for cleaning contact lenses which includes a non-polar solvent in the form of cyclohexane and/or ethyl acetate with a trace amount of an organic solvent in the form of chloroform or ethyl acetate and a polar solvent in the form of an alcohol." The reference also teaches that "the composition further includes thimerosal, a wetting agent, a surfactant, and a buffer" and that "the composition is provided as a saline solution." The reference, however, does not teach or suggest compositions where the carrier is Light Hydrotreated Petroleum Distillates as required by claims 11, 43 and 44. Thus, the teachings of Lloyd *et al.* does not cure the defect in Motsenbocker and Jackson. The combination of Motsenbocker, Jackson and Lloyd *et al.* does not result in the composition of claim 11, which contains Light Hydrotreated Petroleum Distillates, as defined in the instant application. Therefore, claim 11 is not *prima facie* obvious over the teachings of Motsenbocker in view of Jackson and further in view of Lloyd *et al.*

The Office Action alleges that each and every element of claim 43 and 44 is set forth in Motsenbocker and Hey *et al.* except that both fail to explicitly teach the use of octylphenoxypolyethoxyethanol. Applicant respectfully disagrees.

As discussed above, Motsenbocker, Jackson and Lloyd *et al.* do not teach or suggest the compositions of instant claims 43 and 44. These reference do not teach or suggest compositions containing methylal and Light Hydrotreated Petroleum Distillates, nor do these references teach or suggest methods using these compositions as encompassed by claims 43 and 44. Absent such teaching or suggestion, claims 43 and 44 are not *prima facie* obvious over the teachings of Motsenbocker in view of Jackson or Lloyd *et al.*

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**REJECTION OF CLAIMS 16-24 UNDER 35 U.S.C. §103(a)**

The Office Action has reaffirmed the rejection of claims 16-24 under 35 U.S.C. §103(a) for allegedly being obvious over the teachings of Motsenbocker (U.S. Patent No. 4,306,989) in view of Hey *et al.* (U.S. Patent No. 4,260,510). Applicant respectfully traverses this rejection.

**Relevant Law**

The relevant law is previously discussed.

**The instant claims**

Instant claim 16 is directed to a composition containing methylal; Light Hydrotreated Petroleum Distillates; and either a cleaner or a fragrance.

Claims 17 and 18 recite the amounts of the components in the composition of claim 16.

Claim 19 is directed to a composition containing methylal; Light Hydrotreated Petroleum Distillates; and, at least one additive selected from a second solvent, a surfactant and a fragrance.

Claims 20 and 21 recite the amounts of the components in the composition of claim 19.

Claim 22 is directed to a composition containing methylal; water; and at least one additive is selected from: a cleaner, a surfactant, a coupling agent and a fragrance.

Claims 23 and 24 recite the amounts of the components in the composition of claim 22.

**The teachings of the references and differences from the instant claims**

Motsenbocker teaches compositions for releasing adherent deposits from surfaces. The compositions disclosed in the reference contain a first solvent, such as xylene, for softening or dissolving adhesives and a carrier, such as a petroleum distillate, including kerosene. The reference, however, does not teach or suggest compositions where the carrier is Light Hydrotreated Petroleum Distillates, as defined in the instant specification (see, page 6, lines 7-12) and

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required by instant claims 16-24.

Hey *et al.* teaches at column 1, line 10 to line 16, compositions containing "1,1,2-trichloro-1,2,2-trifluoroethane as a primary solvent and a cosolvent." The reference further discloses that the cosolvent "may be selected from a very large number of solvents including by way of example, methylene chloride, acetonitrile, methyl acetate, methylal, acetone, 1,1-dichloroethane, trans-dichloroethylene and lower aliphatic alcohols, for example, ethanol." The reference, however, does not teach or suggest compositions containing Light Hydrotreated Petroleum Distillates as required by instant claims 16-24. Absent such teaching or suggestion, claims 16-24 are not *prima facie* obvious over the teachings of Motsenbocker in view of Hey *et al.* Therefore, Hey *et al.* does not cure the defect in Motsenbocker. Thus, instant claims 16-24 are not *prima facie* obvious over the teachings of Motsenbocker in view of Hey *et al.*

**Claims 16 and 17**

The Office Action alleges that each and every element of claim 16 and 17 is set forth in Motsenbocker except that it fails to teach that methylal can be used as a first solvent. It is also alleged that Hey *et al.* teaches that it is well known that azeotropic mixtures of solvents or mixtures approximating thereto can be employed as cleaning liquids especially for removal of contaminants from synthetic organic polymers or plastic materials. Such mixtures often comprise 1,1,2-trichloro-1,2,2-trifluoroethane as a primary solvent and a cosolvent. The latter may be selected from "a very large number of solvents including by way of example...methylal...and lower aliphatic alcohols, for example, ethanol." The Action concludes that an artisan would have been motivated to make the instant combination because such a combination would result in a cleaning solution that is useful for the removal of contaminants from synthetic organic polymers or plastic materials. Applicant respectfully disagrees.

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As discussed above, Motsenbocker and Hey *et al.* do not teach or suggest the compositions of instant claims 16 or 17. These reference do not teach or suggest compositions containing methylal and Light Hydrotreated Petroleum Distillates as required by instant claims 16 and 17. Absent such teaching or suggestion, claims 16 and 17 are not *prima facie* obvious over the teachings of Motsenbocker in view of Hey *et al.*

**Claims 18-24**

The Office Action alleges that with specific reference to claims 18-24, there is allegedly nothing in the specification suggesting the instant combination (of claim 18) produces unexpected results.

As discussed above, Motsenbocker and Hey *et al.* do not teach or suggest the compositions of instant claims 18-24. These reference do not teach or suggest compositions containing methylal and Light Hydrotreated Petroleum Distillates as required by instant claims 18-24. Absent such teaching or suggestion, claims 18-24 are not *prima facie* obvious over the teachings of Motsenbocker in view of Hey *et al.* Therefore, unexpected results need not be shown to establish the unobviousness of the instant claims.

The Office Action has cited United States Patent No. 5,750,488 to Haskell *et al.* for the interchangeability of MeOH and EtOH in cleaning systems.

Haskel *et al.* teaches compositions containing perfluoro-N-methylmorpholine, decafluoropentane, methylal, and 1-10% of a hydrocarbon or methanol. The reference further teaches that "alcohols suitable for inclusion in the inventive composition include methanol, ethanol, n-propanol, isopropanol, butanol, sec-butanol, tert-butanol and isobutanol." Haskel *et al.* does not teach or suggest compositions containing Light Hydrotreated Petroleum Distillates, nor does the reference teach or suggest compositions containing the amounts of methylal, water, ethanol, t-octylphenoxypolyethoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkyloxypolyethyleneoxypolypropyl-eneoxyethanol, 2-butoxyethanol and a fragrance as required by the instant claims.



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Motsenbocker does not cure the defects of Haskell *et al.* Motsenbocker does not teach or suggest compositions containing Light Hydrotreated Petroleum Distillates, nor compositions containing the amounts of methylal, water, ethanol, t-octylphenoxypolyethoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkyloxy-polyethyleneoxypolypropyleneoxyethanol, 2-butoxyethanol and a fragrance as required by the instant claims. Absent such teaching or suggestion, claims 16-24 are not *prima facie* obvious over the teachings of Motsenbocker in view of Hey *et al.*

**REJECTION OF CLAIMS 29-37, 40, 43, 45, 46 AND 49-53 UNDER**  
**35 U.S.C. §103(a)**

The Office Action has reaffirmed the rejection of claims 29-37, 40, 43, 45, 46 and 49-53 under 35 U.S.C. §103(a) for allegedly being obvious over the teachings of Haskell *et al.* (U.S. Patent No. 5,750,488) in view of Motsenbocker (U.S. Patent No. 4,306,989). Applicant respectfully traverses this rejection.

Claims 37, 46 and 50-52 were cancelled in the AMENDMENT of August 8, 2002, which renders the objection to these claims moot. Claims 36, 39 and 40 are cancelled herein which renders the objection to these claims moot. The rejection of pending claims 29-35, 43, 45, 49 and 53 is addressed below.

**Relevant Law**

The relevant law is discussed above.

**The instant claims**

As amended herein, instant claim 29 is directed to a composition of claim 1, as described above, that contains less than or equal to 25 weight % Light Hydrotreated Petroleum Distillates.

Instant claims 30-35 recite varying amounts of Light Hydrotreated Petroleum Distillates in the composition of claim 1.

Claim 43 is directed to the method of claim 41, where the composition contains specified amounts of methylal, Light Hydrotreated Petroleum Distillates, ethanol, and a fragrance.

Claim 45 is directed to a method of releasing adherent deposits from a

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**AMENDMENT**

surface or substrate, where the composition contains specified amounts of methylal, water, ethanol, t-octylphenoxypolyethoxy-ethanol or C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol, 2-butoxyethanol and a fragrance.

Claim 49 is directed to a method of releasing adherent deposits from a surface or substrate, by applying a composition of claim 1 to the deposits; removing a portion of the deposits from the surface or substrate; applying a second composition of claim 1 to the deposits; and removing the remaining portion of the deposits from the surface or substrate;

wherein the steps are performed in either of the following orders:

- (a), then (b), then (c), and then (d); or
- (c), then (b), then (a), and then (d).

Claim 53 recites compositions for use in the methods of claim 49.

**The teachings of the references and differences from the instant claims**

Haskel *et al.* teaches compositions containing perfluoro-N-methyl-morpholine, decafluoropentane, methylal, and 1-10% of a hydrocarbon or methanol but does not teach or suggest compositions containing Light Hydrotreated Petroleum Distillates as required by instant claims 29-35, 43, 49 and 53. Nor does the reference teach or suggest compositions containing the amounts of methylal, water, ethanol, t-octylphenoxypolyethoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkyloxypolyethyleneoxypolypropyleneoxyethanol, 2-butoxyethanol and a fragrance as specified in claim 45.

Motsenbocker does not cure the defects in Haskell. Motsenbocker does not teach or suggest compositions containing Light Hydrotreated Petroleum Distillates as required by instant claims 29-35, 43, 49 and 53, nor does the reference teach or suggest compositions containing the amounts of methylal, water, ethanol, t-octylphenoxypolyethoxy-ethanol or C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol, 2-butoxyethanol and a fragrance as specified in claim 45. Absent such teaching or suggestion, one of ordinary skill in the art would not have been motivated to do what Applicant has done.

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Absent such motivation, instant claims 29-35, 43, 45, 49 and 53 are not *prima facie* obvious over the teachings of Haskell *et al.* in view of Motsenbocker.

**REJECTION OF CLAIMS 25, 48 AND 56-58 UNDER 35 U.S.C. §103(a)**

The Office Action has reaffirmed the rejection of claims 25, 48 and 56-58 under 35 U.S.C. §103(a) for allegedly being obvious over the teachings of Motsenbocker (U.S. Patent No. 4,306,989) in view of Hey *et al.* (U.S. Patent No. 4,260,510) and further in view of Lloyd *et al.* (U.S. Patent No. 4,421,665). Applicant respectfully traverses this rejection.

**Relevant Law**

The relevant law is discussed above.

**The instant claims**

Claim 25 is directed to a composition containing 11.9 weight % methylal; 71.3 weight % water; and at least one of the following: 0.8 weight % ethanol; 2.7 weight % t-octylphenoxypropoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkoxypropoxyethyleneoxypropoxyethanol; 11.9 weight % 2-butoxyethanol; and 1.0 weight % of a fragrance.

Claim 48 is directed to the method of claim 41, wherein released deposits are removed by directing a stream of water against the released deposits.

Claim 56 is directed to a composition containing 11.9 weight % methylal; 71.3 weight % water; at least one of the following: 1.2 weight % ethanol; 2.7 weight % t-octylphenoxypropoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkoxypropoxyethyleneoxypropoxyethanol; 11.9 weight % 2-butoxyethanol; and 1.0 weight % of a fragrance.

Claim 57 is directed to the method of claim 41, wherein the composition contains:

- a first solvent which is 11.9 weight % methylal;
- a carrier solvent which is 71.3 weight % water;
- a cleaner which is 1.2 weight % ethanol;
- a surfactant which is 2.7 weight % t-octylphenoxypropoxy-ethanol or

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**Motsenbock r  
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C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol;

a coupling agent which is 11.9 weight % 2-butoxyethanol; and,  
a fragrance which is 1.0 weight %.

Claim 58 is directed to the method of claim 49, wherein the first composition contains:

a first solvent which is 11.9 weight % methylal;  
a carrier solvent which is 71.3 weight % water;  
a cleaner which is 1.2 weight % ethanol;  
a surfactant which is 2.7 weight % t-octylphenoxypolyethoxyethanol or

C<sub>8</sub>-C<sub>10</sub>-alkyloxypolyethyleneoxypolypropyleneoxyethanol;

a coupling agent which is 11.9 weight % 2-butoxyethanol; and,  
a fragrance which is 1.0 weight %.

**The teachings of the references and differences from the instant claims**

Motsenbocker teaches compositions for releasing adherent deposits from surfaces. The compositions disclosed in the reference contain a first solvent, such as xylene, for softening or dissolving adhesives and a carrier, such as a petroleum distillate, including kerosene. Motsenbocker does not teach or suggest compositions containing methylal, nor does the reference teach or suggest compositions containing methylal and water in the amounts specified. Furthermore, Motsenbocker does not teach or suggest the amounts specified of the other ingredients in claims 25, 48 and 56-58.

Hey *et al.* does not cure the defects in Motsenbocker. Hey *et al.* teaches teaches compositions containing 1,1,2-trichloro-1,2,2-trifluoroethane and a cosolvent. The reference does not teach or suggest compositions containing water. Thus, the combination of Motsenbocker and Hey *et al.* does not result in the compositions of the instant claims. Therefore, the instant claims are not prima facie obvious over the teachings of Motsenbocker in view of Hey *et al.*

Lloyd *et al.* also does not cure the defects in Motsenbocker and Hey *et al.* Lloyd *et al.* teaches contact lens cleaning solutions. Lloyd *et al.* does not teach

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or suggest compositions containing methylal, nor does the reference teach or suggest compositions containing methylal and water in the amounts specified. Furthermore, the reference does not teach or suggest the amounts specified of the other ingredients in claims 25, 48 and 56-58.

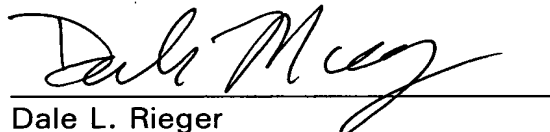
Therefore, the combination of the references does not teach or suggest the instantly claimed subject matter. Therefore, instant claims 25, 48 and 56-58 are not *prima facie* obvious over the teachings of Motsenbocker in view of Hey *et al.* and further in view of Lloyd *et al.*

\* \* \*

In view of the above remarks and amendments, reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Motsenbocker, G. A.

Serial No.: 09/678,619

Confirmation No.: 4452

Filed: October 2, 2000

For: *COMPOSITIONS AND METHODS FOR  
RELEASING ADHERENT DEPOSITS  
FROM SURFACES AND SUBSTRATES*

Art Unit: 1746

Examiner: Winter, G.

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Tim Chettiath

**MARKED UP PARAGRAPHS AND CLAIMS IN ACCORDANCE WITH  
37 C.F.R. §1.121**

**IN THE SPECIFICATION:**

**Please amend the paragraphs on page 3, line 26 to page 4, line 7, with the following paragraphs:**

In these compositions, the first solvent is from about 0.1% to about 50.0 weight % methylal; the carrier solvent is from about 10.0% to about 99.9 weight % Light Hydrotreated Petroleum Distillates; the second solvent is from about 0% to about 50.0 weight % n-propyl bromide; the surfactant is from about 0% to about 20.0 weight % [Triton®] TRITON® X-100 (polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl]ether (also known as t-octylphenoxy-polyethoxyethanol or polyoxyethylene (10) isooctylphenyl ether) or [Triton®] TRITON® XL-80N (C<sub>8</sub>-C<sub>10</sub>-alkyloxypolyethyleneoxypolypropyleneoxyethanol); and, the fragrance is from about 0% to about 20.0 weight %.

In particular, these compositions contain a first solvent that is 2.0% methylal; a carrier solvent that is 84.0% Light Hydrotreated Petroleum Distillates; a second solvent that is 8.0% n-propyl bromide; a surfactant that is 5.0% [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether); and, a fragrance that is 1.0%.

**Please amend the paragraphs on page 4, line 12 to line 23, with the following paragraph:**

In these compositions, the first solvent is from about 0.1% to about 50.0 weight % methylal; the carrier solvent is from about 10.0% to about 99.9 weight % water; the cleaner is from about 0% to about 20.0 weight % ethanol; the surfactant is from about 0% to about 20.0 weight % [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether); the coupling agent is from about 0% to about 20.0 weight % [Butylcellosolve®] BUTYL CELLOSOLVE® (2-butoxyethanol); and, the fragrance is from about 0% to about 20.0 weight %.

In particular, these compositions contain a first solvent that is 11.9 weight % methylal; a carrier solvent that is 71.3 weight % water; a cleaner that is 0.8 weight % ethanol; a surfactant that is 2.7 weight % [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether); a coupling agent that is 11.9 weight % [Butylcellosolve®] BUTYL CELLOSOLVE® (2-butoxyethanol); and, a fragrance that is 1.0 weight %.

**Please amend the paragraphs on page 6, line 1 to line 9, with the following paragraphs:**

As used herein, [Belmay Lemon®] Belmay Lemon or [Belmay Citrus®] Belmay Citrus means a citrus based fragrance that is commercially available (Belmay, Inc., 200 Corporate Boulevard South, Yonkers, N.Y. 10701).

As used herein, [Calumet® 400-500] Calumet 400-500, < 1% (light hydrotreated petroleum distillates) means Light Hydrotreated Petroleum Distillates (CAS number 64742-47-8) which is a high boiling (>200°C) solvent (chemical formula: C<sub>10</sub>-C<sub>17</sub>) that is commercially available from Calumet Lubricants Company, (2780 Waterfront Pkwy E. Suite 200, Indianapolis, IN 46214, product code 0501-00) and is a non-VOC or an exempt VOC.

**Please amend the paragraph on page 7, line 3 to page 8, line 16, with the following paragraph:**

As used herein, an exempt VOC or a non-VOC means those specific organic compounds that are not considered to be a VOC due to their negligible photochemical reactivity. Exempt VOCs and non-VOCs include but are not limited to: methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); methylal (1,1-dimethoxymethane or

formaldehyde dimethyl acetal); 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (HCFC-22); trifluoromethane (HFC-23); Light Hydrotreated Petroleum Distillates ([Calumet® 400-500] Calumet 400-500 (light hydrotreated petroleum distillates)); 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); 1,1,1-trifluoro-2,2-dichloroethane (HCFC-123); 1,1,2,2-tetrafluoroethane (HFC-134a); 1,1-dichloro-1-fluoroethane (HCFC-141b); 1-chloro-1,1-difluoroethane (HCFC-142b); 2-chloro-1,1,2,2-tetrafluoroethane (HCFC-124); n-propyl bromide (NPB); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-134); 1,1-difluoroethane (HFC-152a); 1-bromopropane; parachlorobenzotrifluoride (PCBTF); cyclic, branched, or linear completely methylated siloxanes; acetone, perchloroethylene (tetrachloroethylene); 3,3-dichloro-1,1,2,2-pentafluoropropane (HCFC-225ca); 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb); 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee); difluoromethane (HFC-32); ethylfluoride (HFC-161); 1,1,1,3,3,3-hexafluoropropane (HFC-236fa); 1,1,2,2,3-pentafluoropropane (HFC-245ca); 1,1,2,3,3-pentafluoropropane (HFC-245ea); 1,1,1,2,3-pentafluoropropane (HFC-245eb); 1,1,1,3,3-pentafluoropropane (HFC-245fa); 1,1,1,2,3,3-hexafluoropropane (HFC-236ea); 1,1,2,2,3-pentafluoropropane (HFC-245ca); 1,1,2,3,3-pentafluoropropane (HFC-245ea); 1,1,1,2,3-pentafluoropropane (HFC-245eb); 1,1,1,3,3-pentafluoropropane (HFC-245fa); 1,1,1,2,3,3-hexafluoropropane (HFC-236ea); 1,1,1,3,3-pentafluorobutane (HFC-365mfc); chlorofluoromethane (HCFC-31); 1-chloro-1-fluoroethane (HCFC-151a); 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a); 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ( $C_4F_9OCH_3$ ); 2-(difluoromethoxymethyl)-1,1,1,2,2,3,3,3-heptafluoropropane ( $(CF_3)_2CFCF_2OCH_3$ ); 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ( $C_4F_9OC_2H_5$ ); 2-(ethoxydifluoromethyl)-1,1,2,3,3,3-heptafluoropropane ( $(CF_3)_2CFCF_2OC_2H_5$ ); methyl acetate and perfluorocarbon compounds which fall into classes:

- (i) Cyclic, branched, or linear, completely fluorinated alkanes;
- (ii) Cyclic, branched or linear, completely fluorinated ethers with no saturations;



- (iii) Cyclic, branched or linear, completely fluorinated tertiary amines with no unsaturations; and
- (iv) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

**Please amend the paragraph on page 9, line 26 to line 28, with the following paragraph:**

As used herein, [Triton<sup>®</sup>] TRITON<sup>®</sup> means a registered trademark to Union Carbide Corp. for [a class polyoxyethylene based] surfactants [(sold by Rohm & Haas, Union Carbide, Aldrich<sup>®</sup> and others)].

**Please amend the paragraph on page 21, line 16 to line 23, with the following paragraph:**

In an embodiment, the carrier solvent is an exempt VOC or non-VOC which belongs to the chemical family known as "petroleum hydrocarbon distillate" and has the chemical name of "Light Hydrotreated Petroleum Distillates." [Calumet<sup>®</sup> 400-500] Calumet 400-500 (light hydrotreated petroleum distillates) is the tradename for this class of petroleum distillates as sold by Calumet Lubricants. Compositions containing from about 10.0% to about 99.9% Light Hydrotreated Petroleum Distillates are useful for removing adherent deposits from surfaces and substrates.

**Please amend the paragraph on page 23, line 27 to page 24, line 21, with the following paragraph:**

Surfactants can be added to the compositions to assist in the release of adherent deposits from surfaces and substrates by suspension and emulsification. Non-ionic surfactants are a class of surfactants that have non-ionic but polar head group (hydrophillic) and a non-polar hydrocarbon tail (hydrophobic). These head groups are usually based on a polyoxyethylene chain. An example is polyethyleneglycol mono[4-(1,1,3,3-tetramethylbutyl)-phenyl]ether (also known as t-octylphenoxypolyethoxyethanol) which is commercially available under the name of [Triton<sup>®</sup>] TRITON<sup>®</sup> X-100 (polyoxyethylene (10) isooctylphenyl ether). Other suitable non-ionic surfactants for use in these compositions include but are not limited to: [Triton<sup>®</sup>] polyoxyethylene ethers such as [Triton<sup>®</sup>] TRITON<sup>®</sup> XL-80N (C<sub>8</sub>-C<sub>10</sub>-alkyloxypolyethylene-oxypolypropylene-oxy-ethanol), [Triton<sup>®</sup>] TRITON<sup>®</sup> B (benzyltrimethylammonium

hydroxide), [Triton®] TRITON® N-101 (polyoxyethylene branched nonylphenyl ether) and [Triton®] TRITON® N-101, ([reduced]) (polyoxyethylene (10) isooctylphenyl ether); [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether) and [Triton®] TRITON® X-100, ([reduced]) (polyoxyethylene (10) isooctylcyclohexyl ether); [Triton®] TRITON® X-114 (polyoxyethylene (8) isooctylphenyl ether) and [Triton®] TRITON® X-114, ([reduced]) (polyoxyethylene (8) isooctylcyclohexyl ether); [Triton®] TRITON® X-405 (polyoxyethylene (40) isooctylphenyl ether) and [Triton®] TRITON® X-405, ([reduced]) (polyoxyethylene (40) isooctylcyclohexyl ether); sorbitan esters such as sorbitan monolaurate ([Span® 20] SPAN® 20); sorbitan monooleate ([Span® 80] SPAN® 80); sorbitan palmitate ([Span® 40] SPAN® 40); sorbitan monostearate [Span® 60] SPAN® 60; sorbitan sesquitolate [Span® 83] SPAN® 83, sorbitan trioleate [Span® 85] SPAN® 85, also included are polyoxyethylene oleic acid ester derivatives, polyoxyethylene lauryl amine derivatives, polyoxyethylene stearyl amine derivatives, polyoxyethylene oleyl amine derivatives, polyoxyethylene castor oil derivatives, polyoxyethylene hydrogenated castor oil derivatives, polyoxyethylene bis phenol ether derivatives, polyoxyethylene glycols, sorbitan fatty acid ester derivatives, polyoxyethylene sorbitan fatty acid ester derivatives and polyoxyethylene-polyoxypropylene derivatives and others. Compositions containing from about 0% to about 20.0 weight % [Triton®] TRITON® X-100 (polyoxy-ethylene (10) isooctylphenyl ether) are useful for removing adherent deposits from surfaces and substrates.

**Please amend the paragraphs on page 24, line 23 to page 25, line 9 with the following paragraphs:**

Coupling is a method of compatibilizing a multiphase system that results in an increase in the degree of homogeneity of the system (J. Culver, "Selecting Coupling Agents for Multiphase Models," Modern Paint and Coatings, October, 1980, p.102). Glycol ethers are strong couplers, have inherent cleaning power and work in combination with surfactants to pull oil and water soluble adherent deposits from the surface or substrate. Glycol ethers also couple oil soluble deposits with water and, together with the surfactant, keep the dirt suspended in the solution to prevent it from being re-deposited on the cleaned surface or

substrate. Examples of coupling agents include but are not limited to: [**Butylcellosolve**<sup>®</sup>] BUTYL CELLOSOLVE<sup>®</sup> or [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> EB (2-butoxyethanol or ethylene glycol monobutyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> PnB (propylene glycol n-butyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> DPM (dipropylene glycol methyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> PnB (propylene glycol n-butyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> PM (propylene glycol methyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> DB (diethylene glycol monobutyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> DPnB (dipropylene glycol n-butyl ether), [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> DPB (dipropylene glycol monobutyl ether).

In an embodiment, [**Butylcellosolve**<sup>®</sup>] BUTYL CELLOSOLVE<sup>®</sup> (2-butoxyethanol) or [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> EB, acts to emulsify water containing compositions and is particularly useful for removing printing inks. Compositions containing from about 0% to about 20.0 weight weight % [**Butylcellosolve**<sup>®</sup>] BUTYL CELLOSOLVE<sup>®</sup> (2-butoxyethanol) are useful for removing adherent deposits from surfaces and substrates.

**Please amend the paragraphs on page 25, line 11 to page 26, line 15 with the following paragraphs:**

A fragrance may be used in the compositions to make the solutions more appealing to consumers. There are many common fragrance chemicals used in commercially available laundry products and cleaners to mask odors. These fragrances include but are not limited to: alpha terpineol, agrumen aldehyde light-4, allyl cyclohexane propionate, alpha pinene, amyl cinnamic aldehyde, amyl salicylate, [**Belmay Lemon**<sup>®</sup>] Belmay Lemon, [**Belmay Citrus**<sup>®</sup>] Belmay Citrus, benzoin resinoid 80% in DEP, benzyl acetate, benzyl alcohol, benzyl benzoate, benzyl salicylate, beta pinene, cedarleaf, cedarwood terpenes, cinnamic alcohol, cis-3-hexenyl tiglate, citral, citrathal, citronella, citronellol, civet artificial, clary sage-western, clove stem oil, coumarin, decyl aldehyde, diethylphthalate, dihydro myrcenol, dipropylene glycol, dodecalactone, ethylene brassylate, eucalyptol, eucalyptus, eugenol, fixateur 505, frutene, galaxolide 50%, galbanum 50%, geraniol, geranium bourbon oil, geranyl nitrile, hexyl cinnamic aldehyde, hydroxycitronellal, indol, intreleven aldehyde, ionone gamma methyl, ionone methyl, iso bornyl acetate, iso cyclo citral, iso eugenol, labdanum resin,

laevo menthone, lanandin, lavender, lavol, lemon cold pressed, lemongrass, d-limonene, linalool, linalyl acetate, LRG 201, methyl beta naphthyl ketone, methyl cedrylone, methyl nonyl acetaldehyde, methyl dihydro jasmonate, methyl salicylate, moskene, musk xylol, myrcenyl acetate crude, nerol, nonalactone, oakmoss 25%, octyl aldehyde, olibanum resinoid 80%, opoponax oleo resin 70%, orange oil cold pressed, orange phase oil, orange terpenes, para hydroxy phenyl butanone, para tertiary buninal, patchouli, peppermint RP, peru balsam, petitgrain, phenyl ethyl alcohol, pine oil steam distilled, rose otto synthetic, rosemary, spearmint natural, spruce, terpineol, terpinolene, terpinolene, 4-tertiary butyl cyclohexyl acetate, tetra butyl cyclohexyl acetate, tetra hydro linalool, tonalid, thyme white oil, trichloromethyl phenyl carbinyl acetate, vanillin, vertivert, vertivert acetate, ylang ylang and others.

In an embodiment, [**Butylcellosolve**<sup>®</sup>] BUTYL CELLOSOLVE<sup>®</sup> or [**Dowanol**<sup>™</sup>] DOWANOL<sup>®</sup> EB (2-butoxyethanol), acts to emulsify water containing compositions and is particularly useful for removing printing inks. Compositions containing from about 0% to about 20.0 weight weight % [**Butylcellosolve**<sup>®</sup>] BUTYL CELLOSOLVE<sup>®</sup> (2-butoxy-ethanol) are useful for removing adherent deposits from surfaces and substrates.

**Please amend the paragraphs page 26, line 21 to page 27, line 8 with the following paragraphs:**

Cellulose and fumed silica make excellent thickeners for these compositions. For example, [**Methocel**<sup>®</sup> J12-MS] METHOCEL<sup>®</sup> J12-MS (cellulose ethers), commercially available from Dow Chemical Co., is a water-soluble polymer derived from cellulose. This natural polymer is often used to thicken water based formulations, for example water based paints and cleaners. Many different grades of cellulose are commercially available (pure to technical grades) and are used depending upon their application. Fumed silica (a form of silicon dioxide) can be used either as a hydrophillic or a hydrophobic thickener and are used in many liquid systems for their viscosity control, anti-sag and anti-settling behavior. In non-polar to semi-polar systems, hydrophillic AEROSIL<sup>®</sup> 130, 200, 300, 380 (hydrophillic fumed silica with a specific surface area of 130, 200, 300 and 380 m<sup>2</sup>/g, respectively) grades are used whereas in semi-polar to polar

systems, hydrophobic AEROSIL® R972[,] and R974 (hydrophobic fumed silica treated with DDS (dimethyldichlorosilane) with a specific surface area of 130 and 200 m<sup>2</sup>/g, respectively), AEROSIL® R812S (hydrophobic fumed silica aftertreated with HMDS based on AEROSIL® 300), AEROSIL® R202 (hydrophobic fumed silica aftertreated with polydimethylsiloxane) and AEROSIL® R805 (fumed silica aftertreated with octylsilane based on AEROSIL® 200) are used.

In an embodiment, AEROSIL® 130 (hydrophillic fumed silica with a specific surface area of 130 m<sup>2</sup>/g) is used as a thickener. In other embodiments, AEROSIL® 200, 300, 380 (hydrophillic fumed silica with a specific surface area of 130, 200, 300 and 380 m<sup>2</sup>/g, respectively), R972, R974 (hydrophobic fumed silica treated with DDS (dimethyldichlorosilane) with a specific surface area of 130 and 200 m<sup>2</sup>/g, respectively), R812S (hydrophobic fumed silica aftertreated with HMDS based on AEROSIL® 300), R202 (hydrophobic fumed silica aftertreated with polydimethylsiloxane) or R805 (fumed silica aftertreated with octylsilane based on AEROSIL® 200) are used as thickeners. These thickeners are commercially available from Degussa-Huls. Compositions containing from about 0% to about 20.0 weight % AEROSIL® 130 (hydrophillic fumed silica with a specific surface area of 130 m<sup>2</sup>/g)) are useful for removing adherent deposits from surfaces and substrates.

**Please amend the paragraph page 30, line 14 to line 19 with the following paragraph:**

As is shown in the Examples, compositions A-P were tested for their ability to remove adherent deposits such as gum, crayon, markers and stickers from various surfaces and substrates such as polystyrene plastic, [**Styrofoam®**] STYROFOAM® (polystyrene plastic), carpet and wallpaper. Compositions A to P were judged to be good at removing all of these deposits from these surfaces and substrates.

**Please amend the paragraph page 31, line 28 to line 31 with the following paragraph:**

It should be noted that polystyrene plastics, including [**Plexiglass®**] PLEXIGLAS® (acrylic plastic sheet) and [**Polystyrene®**] polystyrene, are not fogged or dissolved by the compositions disclosed herein. Therefore, the use of these compositions for cleaning polystyrene surfaces is recommended.

**Pleas amend the paragraph page 32, line 14 to page 33, line 11 with the following paragraphs:**

**[Motsenbocker's LiftOff® #1] MOTSENBOCKER'S LIFT OFF® #1 (food, beverage, protein stain remover)**, is formulated to work on water or protein based stains such as: coffee, tea, juice, **[Kool-Aid®] KOOL-AID®**, blood, soda, pet stains, grass and red wine, on surfaces and substrates such as: carpets, fabrics, clothes, tile, furniture, vinyl, cars, and wall coverings;

**[Motsenbocker's LiftOff® #2] MOTSENBOCKER'S LIFT OFF® #2 (adhesive, oily foods and grease stain remover)**, was made to remove petroleum and natural oil stains such as: lipstick, crayons, chewing gum, candle wax, tape, sap, price stickers, salad dressings, olive oil and tar, on surfaces and substrates such as: wallpaper, vinyl, hardwood floors, counters, carpet, tools and clothes;

**[Motsenbocker's LiftOff® #3] MOTSENBOCKER'S LIFT OFF® #3 (pen, ink and marker and graffiti remover)**, was created to remove stains such as: pen, inks, marker, dyes, stamp pad, nail polish and correction fluid, on surfaces and substrates such as: clothes, vinyl, carpets, fabrics, formica, tile and wall coverings.

The compositions and methods described herein can be used in combination with paint removers including but not limited to: **[Motsenbocker's LiftOff® #4 and #5] MOTSENBOCKER'S LIFT OFF® #4 (spray paint graffiti remover) and #5 (latex base paint remover)** and others;

**[Motsenbocker's LiftOff® #4] MOTSENBOCKER'S LIFT OFF® #4 (spray paint graffiti remover)** is designed to remove stains such as: aerosol paint, emanel, semi-gloss, oil lacquers, high gloss, acrylic, primers, urethane enamels, sealer and stains, on surfaces and substrates such as: road signs, brick, **[plexiglass®] PLEXIGLAS® (acrylic plastic sheet)** and vinyl;

**[Motsenbocker's LiftOff® #5] MOTSENBOCKER'S LIFT OFF® #5 (latex base paint remover)** is designed to remove stains such as: latex low, semi-gloss and high gloss paints, latex spray paint, latex stains, wood stains, latex base sealer, paint over spray, on surfaces and substrates such as: carpet, furniture, clothes, concrete and tile.

Thus, the above **[Motsenbocker's LiftOff® #1-#5] MOTSENBOCKER'S LIFT**

OFF® #1-5 (removers) are stain specific. That is, they are specifically formulated to remove the specific types of stains indicated above. Similarly, the compositions provided herein are stain specific, and are formulated to remove the specific types of stains disclosed herein.

**Please amend the paragraph page 33, line 19 to page 34, line 5 with the following paragraph:**

The compositions disclosed herein can be used in combination with any commercially available or homemade cleaning products, to release adherent deposits composed of complex stains (complex adherent deposits). For example, mayonnaise, lipstick and crayons leave complex stains (complex adherent deposits) because they contain mixtures of different classes of chemicals. Mayonnaise is composed of water, protein and natural oils (vinegar, egg yolks and olive oil). Optimal cleaning performance is achieved by combination of the compositions disclosed herein and a cleaner designed to dissolve water and protein stains, such as [**Motsenbocker's LiftOff® #1**] MOTSENBOCKER'S LIFT OFF® #1 (food, beverage, protein stain remover) and others. Lipstick and crayons are composed of paraffin and various dyes. Optimal cleaning performance is achieved by applying a combination of the compositions disclosed herein and a cleaner designed to dissolve inks and dyes such as [**Motsenbocker's LiftOff® #3**] MOTSENBOCKER'S LIFT OFF® #3 (pen, ink and marker and graffiti remover) and others. Thus, the compositions and methods disclosed herein can be used alone or in combination with other stain and spot removers, in particular [**Motsenbocker's LiftOff® #1 or #3**] MOTSENBOCKER'S LIFT OFF® #1 (food, beverage, protein stain remover) or #3 (pen, ink and marker and graffiti remover), to release many different and difficult adherent deposits from various surfaces and substrates.

**Please amend the paragraph page 34, line 18 to line 21 with the following paragraph:**

In particular, the first low VOC compositions for use in these methods are those provided herein. Second compositions for use in these methods include [**Motsenbocker's LiftOff® #1 or #3**] MOTSENBOCKER'S LIFT OFF® #1 (food, beverage, protein stain remover) or #3 (pen, ink and marker and graffiti remover).

Please amend the table "EXAMPLES A to H" on page 36, line 6 to line 20 with the following table:

**EXAMPLES A to H**

Reagent	A*	B*	C*	D*	E*	F*	G*	H*
Calumet 400-500	89.0	87.0	91.0	89.0	92.0	85.0	83.0	84.0
Methylal	2.0	2.0	0	0	6.2	6.2	6.2	2.0
Ethanol	0	0	0	0	0.8	0.8	0.8	0
Belmay Citrus	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
TRITON® X-100	0	2.0	0	2.0	0	0	2.0	5.0
Water	0	0	0	0	0	0	0	0
BUTYL CELLOSOLVE®	0	0	0	0	0	0	0	0
n-Propyl Bromide	8.0	8.0	8.0	8.0	0	7.0	7.0	8.0

Please amend the table "Examples I to P" on page 36, line 21 to page 37, line 6 with the following table:

**EXAMPLES I TO P**

Reagent	I*	J*	K*	L*	M*	N*	O*	P*
Calumet 400-500	91.0	95.7	91.0	84.0	30.0	0	0	0
Methylal	0	3.0	6.2	10.0	10.0	19.0	11.9	12.4
Ethanol	0	0.3	0.8	5.0	10.0	1.9	1.2	1.2
Belmay Citrus	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
TRITON® X-100	5.0	0	1.0	0	10.0	2.9	2.7	12.4
Water	0	0	0	0	29.0	75.2	71.3	60.7
BUTYL CELLOSOLVE®	0	0	0	0	10.0	0	11.9	12.4
n-Propyl Bromide	3.0	0	8.0	8.0	0	0	0	0

\* Values are given as weight %.



**Please amend the paragraph on page 37, line 7 to line 19 with the following paragraph:**

Compositions A to P show a range of possible combinations of first solvents, carrier solvents and additives that are useful for the release of adherent deposits from surfaces and substrates. Compositions A to L are based on the use of [Calumet® 400-500] Calumet 400-500 (light hydrotreated petroleum distillates), also known as Light Hydrotreated Petroleum Distillates, as the carrier solvent whereas compositions N-H use water. Example M contains a mixture of petroleum and water as the carrier solvents. To these carrier solvents, additives such as ethanol, [Belmay Lemon®] Belmay Lemon or [Belmay Citrus®] Belmay Citrus, [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether), [Butylcellosolve®] BUTYL CELLOSOLVE® (2-butoxyethanol) and n-propyl bromide are optionally added for optimal adherent deposit removal performance and consumer appeal. These compositions can or have been tested for their ability to remove adherent deposits from surfaces and substrates. All compositions tested were found to be effective at removing adherent deposits.

**Please amend the paragraphs on page 37, line 22 to page 38, line 2 with the following paragraphs:**

In Example E, the first solvent is 6.2% methylal, the carrier solvent is 92.0% Light Hydrotreated Petroleum Distillates, the cleaner is 0.8% ethanol and the fragrance is 1.0% [Belmay Citrus®] Belmay Citrus.

In Example H, the first solvent is 2.0% methylal, the carrier solvent is 84.0% Light Hydrotreated Petroleum Distillates, the second solvent is 8.0% n-propyl bromide, the surfactant is 5.0% [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether) and the fragrance is 1.0% [Belmay Citrus®] Belmay Citrus.

In Example O, the first solvent is 11.9% methylal, the carrier solvent is 71.3% water, the cleaner is 0.8% ethanol, the surfactant is 2.7% [Triton®] TRITON® X-100 (polyoxyethylene (10) isooctylphenyl ether), the coupling agent is 11.9% [Butylcellosolve®] BUTYL CELLOSOLVE® (2-butoxyethanol) and the fragrance is 1.0% [Belmay Citrus®] Belmay Citrus.

## IN THE CLAIMS:

Please amend claim 2, 26-35, 49, 53, 54, 55 and 58 to read as follows:

2. (Amended) The composition of claim 1, wherein said first solvent is from about 0.1% to about 50.0 weight %; and said [exempt VOC or non-VOC] carrier solvent is from about 50.0% to about 99.9 weight %.

26. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 50 weight % [VOCs] of said carrier solvent that is Light Hydrotreated Petroleum Distillates.

27. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 40 weight % [VOCs] of said carrier solvent that is Light Hydrotreated Petroleum Distillates.

28. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 35 weight % [VOCs] of said carrier solvent that is Light Hydrotreated Petroleum Distillates.

29. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 25 weight % [VOCs] Light Hydrotreated Petroleum Distillates.

30. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 22 weight % [VOCs] Light Hydrotreated Petroleum Distillates.

31. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 10 weight % [VOCs] Light Hydrotreated Petroleum Distillates.

32. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 7 weight % [VOCs] Light Hydrotreated Petroleum Distillates.

33. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 5 weight % [VOCs] Light Hydrotreated Petroleum Distillates.

34. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 4 weight % [VOCs] Light Hydrotreated Petroleum Distillates.

35. (Amended) The composition of claim 1, wherein said composition contains less than or equal to 3 weight % **[VOCs]** Light Hydrotreated Petroleum Distillates.

49. (Twice Amended) A method of releasing adherent deposits from a surface or substrate, comprising the steps of:

- (a) applying a first **[low volatile organic compound (low VOC)]** composition of claim 1 to said deposits;
  - (b) removing a portion of said deposits from said surface or substrate;
  - (c) applying a second **[low VOC]** composition of claim 1 to said deposits;
- and
- (d) removing the remaining portion of said deposits from said surface or substrate;

wherein the steps are performed in either of the following orders:

- (a), then (b), then (c), and then (d); or
- (c), then (b), then (a), and then (d).

53. (Amended) The method of claim 49, wherein the **[first low VOC]** composition comprises:

- a first solvent which is 6.2 weight % methylal;
- a carrier solvent which is 92.0 weight % Light Hydrotreated Petroleum Distillates;
- a cleaner which is 0.8 weight % ethanol; and,
- a fragrance which is 1.0 weight %.

54. (Amended) The method of claim 49, wherein the first **[low VOC]** composition comprises:

- a first solvent which is 2.0 weight % methylal;
- a carrier solvent which is 84.0 weight % Light Hydrotreated Petroleum Distillates;
- a second solvent which is 8.0 weight % n-propyl bromide;
- a surfactant which is 5.0 weight % t-octylphenoxypolyethoxyethanol or C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol; and,
- a fragrance which is 1.0 weight %.

55. (Twice Amended) A method of releasing adherent deposits from a

surface or substrate, comprising the steps of:

(a) applying a first [**low volatile organic compound (low VOC)**]

composition to said deposits;

(b) removing a portion of said deposits from said surface or substrate;

(c) applying a second [**low VOC**] composition of claim 1 to said deposits;

and

(d) removing the remaining portion of said deposits from said surface or substrate;

wherein the steps are performed in either of the following orders:

(a), then (b), then (c), and then (d); or

(c), then (b), then (a), and then (d);

wherein the first low VOC composition comprises:

a first solvent which is 11.9 weight % methylal;

a carrier solvent which is 71.3 weight % water;

a cleaner which is 0.8 weight % ethanol;

a surfactant which is 2.7 weight % t-octylphenoxypolyethoxy-ethanol or C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol;

a coupling agent which is 11.9 weight % 2-butoxyethanol; and,

a fragrance which is 1.0 weight %.

58. (Twice Amended) A method of releasing adherent deposits from a surface or substrate, comprising the steps of:

(a) applying a first [**low volatile organic compound (low VOC)**]

composition to said deposits;

(b) removing a portion of said deposits from said surface or substrate;

(c) applying a second [**low VOC**] composition of claim 1 to said deposits;

and

(d) removing the remaining portion of said deposits from said surface or substrate;

wherein the steps are performed in either of the following orders:

(a), then (b), then (c), and then (d); or

(c), then (b), then (a), and then (d);

wherein the first [**low VOC**] composition comprises:

a first solvent which is 11.9 weight % methylal;  
a carrier solvent which is 71.3 weight % water;  
a cleaner which is 1.2 weight % ethanol;  
a surfactant which is 2.7 weight % t-octylphenoxypolyethoxy-ethanol or  
C<sub>8</sub>-C<sub>10</sub>-alkyl-oxy-polyethylene-oxy-polypropylene-oxy-ethanol;  
a coupling agent which is 11.9 weight % 2-butoxyethanol; and,  
a fragrance which is 1.0 weight %.